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EXAMINER

FERNANDES, CHERYL M

ART UNIT	PAPER NUMBER
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2171

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3

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/028,423

Applicant(s)

IBUKI ET AL.

Examiner

Cheryl M Fernandes

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 December 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-67 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-67 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date. _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to because of spelling errors in the following figures:
 - Fig. 3, wherein the word 'companies' is spelt incorrectly;
 - Fig. 2 and 6, wherein the word 'company' is spelt incorrectly;
 - Fig. 15, element S76, wherein the word 'search' is spelt incorrectly.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference character(s) mentioned in the description: Fig. 3 is said to contain element 21 called 'search results', mentioned on page 7, paragraph 20.

Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because on page 11 line 1, the word 're-replaced' should read 'replaced'. Appropriate correction is required.

4. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required. The specification fails to provide proper antecedent basis for:

- a 'core topic' (Claims 2, 24, and 46);
- a 'tag hierarchy' (Claims 15, 37, and 59).

Claim Objections

5. The claims below are objected to because of the following informalities:

- Claim 4, line 3: the word 'detail' is spelt incorrectly as 'detailedness'.
- Claim 6, line 6: the word 'is' should grammatically read 'are'.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-67 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

6. Claims 1-67 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the analysis of a topic item of a query through a query topic analysis step (see Fig. 6, element 16; para. 48 of the instant specification), does not reasonably provide enablement for the analysis of an intention of a query through a query intention analysis step. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make or use the invention commensurate in scope with these claims.

7. Claims 21, 43, and 65 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for inserting of retrieved values into original text (see para. 126 of the instant specification), does not reasonably provide enablement for replacement of a list with a tag value. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make or use the invention commensurate in scope with these claims.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-67 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. Claims 1, 23, 45, and 67 recite the limitation "a query intention analysis step of analyzing the intention of the query". Examiner asserts that the specification does not clearly define the scope of the 'intention' of a query, although it teaches an example of

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the analysis of a query topic. Furthermore, claims 2, 24, and 46, which depend on 1, 23, and 45 respectively, mention specifically determining a topic item or core topic under the intention analysis step. These dependant claims narrow the scope to just this one area of topic items or core topic, indicating that claims 1, 23, 45, and 67 are clearly broader and thereby need to be clearly defined in scope.

9. Claims 18, 40, and 62 recite the limitation "search criteria for an item on a main item list provided in advance are generated". However, it is unclear as to whether the search criteria or the main item list is generated. In addition, the claims also recite the limitation "a topic in the search request for which no correspondence to an item in the database is found at said search criteria generation step to repeat the search in each of the main items". It is unclear as to whether or not the repeating of the search in each of the main items is part of the search criteria generation step.

10. Claims 1, 23, 45, and 67 contain insufficient antecedent basis for the following limitations in the claims:

- Line 2 of limitation 2 containing the phrase "the result of the analysis";
- Line 1 of limitation 4 containing the phrase "the intention";
- Line 2 of limitation 5 containing the phrase "the output format";
- Line 3 of limitation 5 containing the phrase "the result of said analysis".

11. Referring to claims 3, 25, and 47, it is unclear whether or not the limitation is claiming that the search results of the presentation items are to be ordered.

12. Claims 4, 26, and 48 recite the limitation "the specific items" in the claims. There is insufficient antecedent basis for this limitation in the claims.

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13. Claims 8, 30, and 52 recite the limitation "the description" in the claims. There is insufficient antecedent basis for this limitation in the claims.

14. Claims 16, 38, and 60 recite the limitation "said search request generation" in the claims. There is insufficient antecedent basis for this limitation in the claims.

15. Claims 16, 38, and 60 recite the limitation "the analysis of the correspondence" in the claims. There is insufficient antecedent basis for this limitation in the claims.

16. Referring to claims 21, 43, and 65, the limitation 'a secondary database' is recited in several lines of the claims. It is unclear whether or not the secondary database that holds values of tags and the secondary database relating to an item in search criteria is first searched, are the same database.

17. Referring to claims 20, 42, and 64, the limitation 'when text is entered into the database' is recited. It is unclear whether the text is actually entered to be *added into* the database or if it is entered to be *searched* in the database.

18. Referring to claims 22, 44, and 66, the limitation 'individual items are extracted and entered into individual databases' is recited. It is unclear whether the individual items are actually entered to be *added into* the databases or if they are entered to be *searched* in the databases.

19. Referring to claims 21, 43, and 65, the claims recite that ' a list of values for a key item is replaced with a value specified for a tag', however, it is unclear as to why the list of values would be replaced with a value specified for a tag, when the list is not being used in the search.

Any remaining claims depending from claims noted above therefore inherit the
aforenoted deficiency and are also hereby rejected.

Due to the number of 35 USC § 112 rejections, the examiner has provided a
number of examples of the claim deficiencies in the above rejections, however, the list
of rejections may not be all inclusive. Applicant should refer to these rejections as
examples of deficiencies and should make all the necessary corrections to eliminate the
35 USC § 112 problems and place the claims in proper format.

Due to the vagueness and a lack of clear definition of the terminology and
phrases used in the specification and claims, the claims have been treated on their
merits as best understood by the examiner.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that
form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by
another filed in the United States before the invention by the applicant for patent or (2) a patent
granted on an application for patent by another filed in the United States before the invention by the
applicant for patent, except that an international application filed under the treaty defined in section
351(a) shall have the effects for purposes of this subsection of an application filed in the United States
only if the international application designated the United States and was published under Article 21(2)
of such treaty in the English language.

20. Claims 1-6, 8, 9, 11, 23-28, 30, 31, 33, 45-50, 52, 53, 55, and 67 are rejected
under 35 U.S.C. 102(e) as being anticipated by US PGPub. Number US 2001/0047355
A1 by Anwar.

21. Referring to claims 1, 23, 45, and 67, Anwar discloses:

A query-and-response processing method, system, and computer program ('query information retrieval content enhancing system and method', Abstract, Field of Invention, Summary, 'search engine program, para. 77 (Fig. 5B, element 554)) for receiving a search request concerning a query input by a user ('user posed query (Boolean or natural language)', para. 4) and searching a database ('polling' of database, para. 9; QIRCES contains a query/results database, para. 11, 28; para. 43) to present search results to the user (para. 9, lines 6-8; para. 43), comprising:

- a search request analysis step of analyzing said search request (Search Engine Interface (SEI), para. 46¹) provided by said user ('analyzing user query', para. 3, 9);
- a search criteria generation step of generating search criteria (application server determines type of query, para. 69) based on the result of the analysis of said search request (user query is captured by an application server(Fig. 3, element 302), para. 68; DMR operate on query terms to generate a request, para. 70);
- a search execution step of searching said database ('input query into a database', para. 12) according to the generated search criteria (MWI (Middleware Interface) sends DB (database) requests to a database that returns results, para. 70-71; Fig. 3);
- a query intention analysis step of analyzing the intention of the query (para. 9, lines 1-3; 'extracting query elements', para. 12, 'query element classification

- protocol', para. 14; para. 13) based on the result of the analysis of said search request ('keywords' and 'connectors' are extracted from queries depending on the determination of the type of language the query uses, para. 69; Fig. 3, element 317; keyword refinement, para. 48, lines 14-18);
- an output formatting step of selecting items to be presented to the user (para. 14, lines 13-17) and determining the output format of search results (results presented in predetermined order, para. 14, lines 13-17; 'display format conditional step' (Fig. 4, element 402), para. 73) according to the result of said analysis of the intention of said query (para. 28, lines 5-9; para. 44, lines 15-16); and
 - a presentation step of receiving the result of said output formatting step to present data to said user ('display page format step' (Fig. 4, element 410), para. 73; Fig. 7A; para. 4, lines 9-11; 'presentation routine', para. 14, lines 13-17; para. 26; email interface, para 28 and 52).

22. Referring to claims 2, 24, and 46, Anwar discloses query intention analysis step comprises a step of determining a topic item, said topic item being a core topic of the search request (see discussion of limitation 4 of claim 1 above); and said output formatting step comprises a step of selecting an item to be presented to said user based on the determination as to whether or not the item is the topic item (results relating to keywords and connectors are gathered, para. 69; also see discussion of limitation 5 of claim 1 above).

¹ The Search Engine Interface (SEI) allows users to pose queries or search requests in a variety of

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23. Referring to claims 3, 25, and 47, Anwar discloses processing information by adjusting the order of which the presentation items obtained as the search results (para. 28, lines 9-12 and 20-24; para. 44; 'Rank Results' button, Figure 7B, element 788, para. 85, lines 4-8).

24. Referring to claims 4, 26, and 48, Anwar discloses adjusting the level of detail of the presentation to provide all the specific items or only main items relating to a particular subject (see Abstract; para. 28, lines 1-9; para 44, lines 15-16; para 48).

25. Referring to claims 5, 27, and 49, Anwar discloses classifying the search results according to specified item values to organize by category the information to be presented to the user (results are tabulated into geographical, drink and years categories, para. 84, Fig. 7B, elements 758, 760, 762).

26. Referring to claims 6, 28, and 50, Anwar discloses using data specifying an item relating to a particular item to add the item relating to the particular item to the items to be presented, after the items to be presented to said user is determined (para. 27²).

27. Referring to claims 8, 30, and 52, Anwar discloses determining an item under which a value is specified as search criteria (para. 27, lines 1-15); and removing an item used as the search criteria from presentation items after the presentation items are determined and adding the value of said item to the presentation items as the description of said presentation items (see 'Drink' description title under which 'alcoholic', 'beverages', and 'dairy' categories fall in search results in Fig. 7B; Refer to Fig. 6A for depiction of 'drink' as a search criteria in window 662).

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28. Referring to claims 9, 31, and 53, Anwar discloses an item under which a value is specified and for which no search data is included in the search results is excluded from presentation items during the selection of the presentation items (see Fig. 7B for 'US' item value mentioned in table of results (element 758) but excluded from graphical representation of search results, in element 764).

29. Referring to claims 11, 33, and 55, Anwar discloses:

providing an item database containing all the values in a particular item that are held in a database to be searched (see Background, para. 7, lines 1-10; 'polling database for related keywords', para. 9; para.14, lines 1-7; 'query/results database', para. 28, lines 1-20); and,

if no entry in said item database matches a specified value in the item in the search request, searching for entries having values similar to the specified value (see Abstract, lines 1-7; para. 13; 'related query element routine', para. 14) and presenting said similar values to the user as alternative value candidates from which the user can make a selection (Abstract, lines 7-12; 'suggested questions' are output, para. 10, lines 5-10; para 13; 'presentation routine', para. 14).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

² After the system extracts elements from the query and determines related keywords, it presents the related results as an active list or on a page-by-page basis.

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

30. Claims 7, 29, and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anwar as applied to claims 1, 23, and 45 above, and further in view of US Patent Number 6,401,084 B1 issued to Ortega et al. (hereafter Ortega).

Referring to claims 7, 29, and 51, Anwar discloses all of the claimed subject matter as disclosed above, but fails to teach storing information about correspondence between a word used for specifying search criteria in an item in the database and an item name in the database as well as replacing said item name in the database with said word to present said search results.

However, Ortega teaches storing information about correspondence between a word used for specifying search criteria in an item in a database and an item name in the database ('correlation table' contains a 'related terms list', col. 6, lines 14-20; col. 7, lines 10-24). Ortega also teaches replacing the item name in the database with a word to present search results (see Abstract; Summary (col. 1 line 65- col. 2, line 34); col. 7, lines 17-21).

It would be obvious to one of ordinary skill in the art at the time that the invention was made to modify Anwar to include storing information about correspondence between a word used for specifying search criteria in an item in a database and an item name in the database as well as replacing the item name in the database with a word to present search results, as taught by Ortega.

The ordinary skilled artisan would have been motivated to modify Anwar per the above for the purpose of increasing the likelihood that the query result will contain items

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that are of interest to the user as the replacement terms found by the searching method are more likely to be the terms that were intended by the user. In addition, the method is well suited for correcting terms that do not appear in a dictionary, such as proper names and product names (col. 2, lines 34-47).

31. Claims 10, 13, 16, 32, 35, 38, 54, 57, and 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anwar as applied to claims 1, 23, and 45 above, in view of US Patent Number 5,907,837 issued to Ferrel et al (hereafter Ferrel).

32. Referring to claims 10, 32, and 54, Anwar discloses all of the claimed subject matter as disclosed above, and also teaches providing an item database containing all the values in a particular item that are held in a database to be searched (para. 43).

Anwar fails to teach providing an alert to the user for indicating a search failure and the cause thereof before executing the entire search process.

However Ferrel teaches analogous art wherein a user is provided with an alert for indicating a search failure and the cause thereof before executing the entire search process (col. 42, lines 60-65).

It would be obvious to one of ordinary skill in the art at the time that the invention was made to modify Anwar to include providing an alert to the user for indicating a search failure and the cause thereof before executing the entire search process, as taught by Ferrel.

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The ordinary skilled artisan would have been motivated to modify Anwar per the above for the purpose of allowing the user to know what happened when no matches to their search are found (see col. 42, lines 60-65).

33. Referring to claims 13, 35, and 57, Anwar discloses all of the claimed subject matter as disclosed above, and also teaches generating search criteria to be first used in the search execution step (refer to discussion of claim 1, limitations 2 and 3 above).

Anwar fails to teach determining whether the search succeeds or fails based on the results of the search performed, widening search criteria so as to increase the number of search sets if the search fails, and repeatedly widening the search criteria until the search succeeds or the search criteria becomes unable to be widened.

However Ferrel teaches analogous art wherein the determination as to whether a search succeeds or fails based on the results of the search performed, in particular, situations in which a search failed due to no results or a search was successful but too many search results were found (col. 42, line 60 – col. 43, line17).

Ferrel also teaches, widening search criteria so as to increase the number of search sets if the search fails by allowing a user to find more matches by clearing some of the query elements or values and submitting an edited search by pressing the 'Find Now' button (col. 42, lines 60-65; col. 43, lines 10-17).

In addition, Ferrel teaches repeatedly widening the search criteria until the search succeeds or the search criteria become unable to be widened wherein the user can continue to clear query elements and use the 'Find Now' button until a successful match is found or be alerted when the search criteria become unable to be widened and

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thus returns a 'no articles like you described could be found' alert (col. 41, lines 57-65; col. 42, line 60- col. 43, line 17).

It would be obvious to one of ordinary skill in the art at the time that the invention was made to modify Anwar to include determining whether the search succeeds or fails based on the results of the search performed, widening search criteria so as to increase the number of search sets if the search fails, and repeatedly widening the search criteria until the search succeeds or the search criteria become unable to be widened, as taught by Ferrel.

The ordinary skilled artisan would have been motivated to modify Anwar per the above for the purpose of allowing a user to define a search object to retrieve content matching desired criteria (col. 3, lines 61-62). In addition, the information retrieval server satisfies the need for fast and efficient search over a low-bandwidth communication path (col. 4, lines 20-25).

34. Referring to claims 16, 38, and 60, Anwar discloses all of the claimed subject matter as disclosed above and also teaches the determination as to whether or not an item extracted as a topic in the search request at said search request generation step corresponds to an item in the database to be searched (refer to discussion of limitation 4 of claim 1 above).

However, Anwar fails to teach an alert concerning the form of the search request if the analysis at said search request analysis step fails and an alert indicating that the query is outside the scope of the system if the analysis of the correspondence fails.

Ferrel teaches analogous art wherein an alert that is provided to a user if no results are shown at the end of a search, thereby indicating that a query is outside the scope of a system (refer to discussion of claim 10 above with regard to the provision of an alert that indicates search failure). Ferrel also teaches an alert that is provided concerning the form of a search request if the analysis at said search request analysis step fails, by suggesting to the user that the form of the query was not suitable and that the user should clear some of the values in the query in order to obtain better results (col. 42, lines 60-65). Examiner respectfully asserts that the alert provided for by Ferrel performs both duties addressed above. In addition, Ferrel also teaches another alert that indicates the form of a search request if the analysis fails by suggesting to the user that the form of a query was not suitable and that the user should add more values to the query to order to reduce the number of search results obtained (col. 43, lines 10-17).

It would be obvious to one of ordinary skill in the art at the time that the invention was made to modify Anwar to include an alert concerning the form of the search request if the analysis at said search request analysis step fails and indicating that the query is outside the scope of the system if the analysis of the correspondence fails, as taught by Ferrel.

The ordinary skilled artisan would have been motivated to modify Anwar per the above for the purpose of allowing the user to know what happened when no matches to their search are found (see col. 42, lines 60-65) or when too many matches are found (see col. 43, lines 5-17).

35. Claims 12, 34, and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anwar as applied to claims 1, 11, 23, 33, 45, and 55 above, in view of US Patent Number 5,752,244 issued to Rose et al. (hereafter Rose), and further in view of US Publication Number 2002/0042784 A1 by Kerven et al. (hereafter Kerven).

Referring to claims 12, 34, and 56, Anwar discloses all of the claimed subject matter as disclosed above, and also teaches presenting an alternative to a specified value in an item to a user, and allowing the alternative to be accepted by the user (for presentation of alternatives, refer to discussion of claims 6, 28, and 50 above; for allowing alternatives to be accepted by user refer to para. 26, lines 10-14).

However, Anwar fails to teach, storing a pair of an originally specified value and an alternative as synonymous words for a value in an item to use the pair to automatically widen criteria during generation of search criteria.

Rose teaches analogous art including storing a pair of an originally specified value and an alternative as synonymous words for a value in an item. These stored pairs are keyword-category pairs that are stored in a keywords table as well as a session data object (col. 14, lines 44-50).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Anwar with the teachings to Rose to include storing a pair of an originally specified value and an alternative as synonymous words for a value in an item

The ordinary skilled artisan would have been motivated to modify Anwar with the teachings of Rose for the purpose of storing of multimedia assets which in turn allows the reusing of existing assets when developing new multimedia applications (see Background, lines 39-55) and for the purpose of using predetermined criteria to determine whether to allow checkout of a particular multimedia asset stored on a database (Abstract).

While Rose teaches storing pairs of synonymous words, Rose is silent as to the automatic widening of criteria during generation of search criteria.

However, Kerven teaches the automatic widening or expansion of criteria during generation of search criteria (Abstract; para. 25-26, 69-70, and 115).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Anwar and Rose with the teachings to Kerven to include automatic widening or expansion of criteria during generation of search criteria for the purpose of allowing search engines that begin with a set of keywords provided by the user to generate links potentially relevant to the keywords provided thereby enabling a more defined search.

The ordinary skilled artisan would have been motivated to modify Anwar and Rose with the teachings to Kerven per the above for the purpose enabling a search to be more convenient as it generates links directly to relevant information rather than requiring navigation (para 14, lines 1-6).

Claims 14, 36, and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anwar in view of Ferrel, as applied to claims 13, 35, and 57 above, and further in view of Ortega.

36. Referring to claims 14, 36, and 58, the combination of Anwar/Ferrel as set forth above discloses all of the claimed subject matter including the widening of search criteria but the aforementioned combination is silent as to the value specification for a particular item in the database being extended to the value specification for an event relating to the item.

However, Ortega teaches the extension or replacement of a value specification for an item with a value specification for a related event by replacing a non-matching term item in a search query with a replacement related term event as a substitute (refer to discussion of claim 7 above with respect to replacing an item name in a database; col. 2, line 58 - col. 3, line 2).

It would be obvious to one of ordinary skill in the art at the time that the invention was made to modify Anwar/Ferrel to include extension or replacement of a value specification for an item with a value specification for a related event, as taught by Ortega.

The ordinary skilled artisan would have been motivated to modify Anwar/Ferrel per the above for the purpose of increasing the likelihood that the query result will contain items that are of interest to the user as the replacement terms found by the searching method are more likely to be the terms that were intended by the user. In

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addition, the method is well suited for correcting terms that do not appear in a dictionary, such as proper names and product names (co. 2, lines 34-47).

Claims 15, 37, and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anwar in view of Ferrel, as applied to claims 13, 35, and 57 above, and further in view of US Publication Number 2001/0044758 A1 by Talib et al. (hereafter Talib).

37. Referring to claims 15, 37, and 59, the combination of Anwar/Ferrel as set forth above discloses all of the claimed subject matter. While Anwar fails to disclose a database to be searched that is composed of structured text and structure tags with corresponding text, Ferrel discloses a database to be searched that is composed of structured text (col. 25, lines 46-48). In addition Ferrel also discloses structure tags with corresponding text (col. 22, lines 18-37).

However, Anwar/Ferrel fails to disclose that a structure tag is replaced with a tag covering a broader text range in a tag hierarchy to widen the search criteria.

Talib discloses a structure tag that is replaced with a tag covering a broader text range in a tag hierarchy to widen the search criteria (para. 95, Fig. 4). Talib discloses through the illustration of Fig. 4, that a user may drill-up through the search results presented, and change the category to be searched from Women's Clothing to Price, while still maintaining the same search constraints.

It would be obvious to one of ordinary skill in the art at the time that the invention was made to modify Anwar/Ferrel to include that a structure tag is replaced with a tag

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covering a broader text range in a tag hierarchy to widen the search criteria, as taught by Talib.

The ordinary skilled artisan would have been motivated to modify Anwar/Ferrel per the above for the purpose of allowing a user to 'navigate' through a search using any category or taxonomy at any time. Additional motivation could be that users are able to view the transmitted and displayed categories in order to select from, rather than being provided with long lists of electronic record hits (Summary, para 35 and 36).

Claims 17, 39, and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anwar, as applied to claims 1, 23, and 45 above, in view of Rose and further in view of Ferrel.

38. Referring to claims 17, 39, and 61, Anwar discloses all of the claimed subject as set forth above, but fails to disclose a list of keywords that is unique to each of various areas and is used to determine the area of the search request. In addition, Anwar fails to disclose an alert that is provided to the user for indicating that the query is outside the scope the system if it is determined that the area of the search request is not addressed by the system.

Rose teaches in analogous art, a list of keywords that is unique to each of various areas and is used to determine the area of a search request (col. 17, lines 36-39 and 46-50; col. 20, line 66- col. 21, line10).

It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify Anwar to include a list of keywords that is unique to each

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of various areas and is used to determine the area of a search request, as taught by Rose.

The ordinary skilled artisan would have been motivated to modify Anwar per the above for the purpose of specifying a keyword-category combination to add a search component to a query (col. 21, lines 10-18).

However, while Rose discloses the above mentioned limitation, Rose is silent as to an alert that is provided to the user for indicating that a query is outside the scope a system if it is determined that the area of a search request is not addressed by the system.

Ferrel teaches in analogous art, an alert that is provided to the user for indicating that a query is outside the scope of a system if it is determined that the area of a search request is not addressed by the system (refer to discussion of claims 10 and 16 above).

It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify Anwar/Rose to include an alert that is provided to the user for indicating that a query is outside the scope of a system if it is determined that the area of a search request is not addressed by the system, as taught by Ferrel.

The ordinary skilled artisan would have been motivated to modify Anwar/Rose per the above for the purpose of allowing the user to know what happened when no matches to their search are found (see col. 42, lines 60-65) or when too many matches are found (see col. 43, lines 5-17).

Claims 18, 40, and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anwar, as applied to claims 1, 23, and 45 above, in view of Ortega.

39. Referring to claims 18, 40, and 62, Anwar discloses all of the claimed subject as set forth above, but fails to teach that search criteria for an item on a main item list provided in advance are generated for a topic in a search request for which no correspondence to an item in a database is found at said search criteria generation step to repeat the search in each of the main items and present the search results to a user.

However, Ortega teaches a 'related terms' list provided in advance that is generated for a topic in a search request for which no correspondence to an item in a database is found and repeats the search in each of the main items and presents the search results to a user (see Summary, col. 1, line 65- col. 2, line 33). Ortega teaches that the related terms list is used to compare related terms in the list to one or more non-matching terms in a query to find possible substitutes. The user can also be prompted to select possible replacement terms for the non-matching term from a list that is presented. The search is then performed on the modified query once the replacement term is chosen. Examiner respectfully asserts that this process of choosing a replacement term is performed multiple times, with a modified search being performed each time for each of the one or more non-matching terms in the query.

It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify Anwar to include that search criteria for an item on a main item list provided in advance are generated for a topic in the search request for which no correspondence to an item in the database is found at said search criteria generation step to repeat the search in each of the main items and present the search results to the user, as taught by Ortega.

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The ordinary skilled artisan would have been motivated to modify Anwar per the above for the purpose of enabling users of the spelling correction method of Ortega to select replacement terms that are more likely to be the terms intended for use by the user. The method increases the likelihood that the query result will contain items that are of interest to the user (col. 2, lines 34-47).

Claims 19, 41, and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anwar, as applied to claims 1, 23, and 45 above, in view of Ferrel, and further in view of US Publication Number 2002/0107735 A1 by Henkin et al (hereafter Henkin).

40. Referring to claims 19, 41, and 63, Anwar discloses all of the claimed subject as set forth above, but fails to teach that a database to be searched is a text base structured with tags, and if analysis of a search request shows that the query is about a word without tag, the word is first used to perform a simple keyword search without tag and the results of the search are classified by tag added to words to be searched to present the results to the user.

However Ferrel teaches analogous art wherein a database to be searched is a text base structured with tags (refer to discussion of claim 15 above with regard to a structured text database).

It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify Anwar to include a database to be searched that is a text base structured with tags, as taught by Ferrel.

The ordinary skilled artisan would have been motivated to modify Anwar per the above for the purpose of indexing database content (col. 3, lines 40-65; col.25, lines 46-50).

However, while Ferrel discloses the above mentioned limitation, Ferrel is silent as to the situation wherein if analysis of a search request shows that the query is about a word without tag, the word is first used to perform a simple keyword search without tag and the results of the search are classified by tag to present the results to the user.

Henkin teaches analogous art wherein if analysis of a search request shows that the query is about a word without tag, the word is first used to perform a simple keyword search without tag (para. 48). Henkin also teaches that the results of the search are classified by tag to present the results to the user (para. 93- 98; refer to Fig. 24d in reference to classification by categorical tag, namely, 'Apparel', 'Hawaiian Apparel', and 'Work Clothes and Uniform Apparel').

It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify Anwar/Ferrel wherein if analysis of a search request shows that the query is about a word without tag, the word is first used to perform a simple keyword search without tag and the results of the search are classified by tag to present the results to the user, as taught by Henkin.

The ordinary skilled artisan would have been motivated to modify Anwar/Ferrel per the above for the purpose of marking up textual object returned from the search and thus enabling any targeted word, phrases, etc. on any parsed web page to be converted to a link of any designation. In addition, this context-based technology proactively

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responds to textual content on any given web page, anywhere on the Internet, by marking up predefined keywords or phrases. In this way, target HTML content can be converted into links that direct users to specific web pages (para. 48,50).

Claims 20, 21, 42, 43, 64, and 65, are rejected under 35 U.S.C. 103(a) as being unpatentable over Anwar, as applied to claims 1, 23, and 45 above, and further in view of US Patent Number 5,640,553 issued to Schultz.

41. Referring to claims 20, 21, 42, 43, 64, and 65, Anwar discloses all of the claimed subject as set forth above, but fails to disclose:

- a text base database to be searched that is structured with tags in a main database;
- a provided list of items essential to a subject that is referenced to determine whether or not an essential item for one of items constituting a subject of the text to be entered is described in the text;
- searching a secondary database provided for the missing item by specifying a key item of the subject in the text to be entered and having the text complemented with a value obtained;
- replacing the list with a value specified for the tag to search through the main database.

However Schultz teaches in analogous art:

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- a text base database to be searched that is structured with tags in a main database (col. 24, lines 43-46 and 50-52; 'image/text database', col. 29, lines 21-29 (Fig. 1, element 118); 'library database', col. 9, lines 15-18);
- a provided list of items essential to a subject that is referenced to determine whether or not an essential item for one of items constituting a subject of the text to be entered is described in the text ('index database', col. 4, lines 11-18; 'list of classifier words', col. 32, lines 25-29);
- searching a secondary database provided for the missing item by specifying a key item of the subject in the text to be entered and having the text complemented with a value obtained (different 'subject databases' can be searched, col. 32, lines 10-29);
- replacing the list with a value specified for the tag to search through the main database (col. 31, lines 44-55; col. 32, lines 10-22³).

It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify Anwar with the teachings to Schultz to include a text base database to be searched that is structured with tags in a main database, a provided list of items essential to a subject that is referenced to determine whether or not an essential item for one of items constituting a subject of the text to be entered is described in the text, searching a secondary database provided for the missing item by specifying a key item of the subject in the text to be entered and having the text

complemented with a value obtained, and replacing the list with a value specified for the tag to search through the main database.

The ordinary skilled artisan would have been motivated to modify Anwar per the above for the purpose of enabling users to search particular subjects and to avoid searching through documents that are unlikely to be of interest to the user, which is done by the categorization of input documents (col. 31, lines 44-54).

Claims 22, 44, and 66, are rejected under 35 U.S.C. 103(a) as being unpatentable over Anwar, as applied to claims 1, 23, and 45 above, in view of Schultz, and further in view of Ortega.

42. Referring to claims 22, 44, and 66, Anwar discloses all of the claimed subject as set forth above, but fails to disclose:

- a database to be searched that is a text base structured with tags;
- values for individual items are extracted and entered into individual databases at the same time when text is entered into the text database; and
- a group of spellings resembling each other is retrieved from each of the individual databases after the completion of the entry to enable a precise detection of variations in notation compared with that in a case where the entire text is searched.

However, Schultz teaches in analogous art:

³ The user can specify individual category or subject databases to search through within the image/text database.

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- a database to be searched that is a text base structured with tags (refer to discussion of claim 21 above in reference to limitation 1); and
- values for individual items are extracted and entered into individual databases at the same time when text is entered into the text database (subject databases reside within the image/text database of the information retrieval system and are accessed when a query is input, col. 31, lines 44-55; col. 32, lines 10-22).

It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify Anwar with the teachings of Schultz to include a database to be searched that is a text base structured with tags and values for individual items are extracted and entered into individual databases at the same time when text is entered into the text database.

The ordinary skilled artisan would have been motivated to modify Anwar per the above for the purpose of avoiding searching through documents in a database that are unlikely to be of interest to a user, since a user can specifically search particular databases or categories (col. 31, lines 44-52).

While Schultz mentions the fact that queries are spell-checked before being processed (col. 12, lines 36-45), Schultz remains silent as to the retrieval of a group of spellings resembling each other after completion of input of a search query.

However, Ortega teaches retrieval of a group of spellings resembling each other

after completion of input of a search query ('associated related terms list' (Fig. 3, element 62), col. 4, line 61- col. 5, line 18; col. 7, lines 10-24).

It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify Anwar/Schultz with the teachings to Ortega to include retrieval of a group of spellings resembling each other after completion of input of a search query.

The ordinary skilled artisan would have been motivated to modify Anwar/Schultz per the above for the purpose of correcting misspellings of terms that are do not appear in a dictionary thereby identifying terms that tend to be characterized by non-dictionary terms (col. 7, lines 25-29).

Conclusion

43. If a copy of a provisional application listed on the bottom portion of the accompanying Notice of References Cited (PTO-892) form is not included with this Office action and the PTO-892 has been annotated to indicate that the copy was not readily available, it is because the copy could not be readily obtained when the Office action was mailed. Should applicant desire a copy of such a provisional application, applicant should promptly request the copy from the Office of Public Records (OPR) in accordance with 37 CFR 1.14(a)(1)(iv), paying the required fee under 37 CFR 1.19(b)(1). If a copy is ordered from OPR, the shortened statutory period for reply to this Office action will not be reset under MPEP § 710.06 unless applicant can demonstrate a substantial delay by the Office in fulfilling the order for the copy of the

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provisional application. Where the applicant has been notified on the PTO-892 that a copy of the provisional application is not readily available, the provision of MPEP § 707.05(a) that a copy of the cited reference will be automatically furnished without charge will not apply.

44. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cheryl M Fernandes whose telephone number is (703) 305-3917. The examiner can normally be reached on 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on (703) 308-1436. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CMF
June 21, 2004


WAYNE AMSBURY
PRIMARY PATENT EXAMINER